

Office of Inspector General

September 20, 1999

Mr. Reed Gardiner, Partner
PricewaterhouseCoopers LLP
350 South Grand Avenue
Los Angeles, CA 90071-3405

Re: Final Report on Quality Control Review of PricewaterhouseCoopers LLP and Defense
Contract Audit Agency Audit of the Jet Propulsion Laboratory at the California Institute
of Technology for the Fiscal Year Ended September 21, 1997 Redacted Report*
Assignment No. A9906300
Report No. IG-99-045

Dear Mr. Gardiner:

The subject final report is provided for your use. Please refer to the Results of Review
section for the overall review results.

If you have any questions concerning the report, please contact Mr. Patrick A. Iler, Director,
Audit Quality, at (216) 433-5408, or Ms. Vera Garrant, A-133 Audit Manager, at (202)
358-2596. We appreciate the courtesies extended to the audit staff. The report distribution is
in Appendix F.

Sincerely,

[original signed by]

Russell A. Rau
Assistant Inspector General for Auditing

Enclosure

Office of Inspector General

September 20, 1999

Mr. Robert W. Matter
Regional Director, Western Region
Defense Contract Audit Agency
16700 Valley View Avenue, Suite 300
La Mirada, CA 90638-5833

Re: Final Report on Quality Control Review of PricewaterhouseCoopers LLP and Defense
Contract Audit Agency Audit of the Jet Propulsion Laboratory at the California Institute
of Technology for the Fiscal Year Ended September 21, 1997
Assignment No. A9906300
Report No. IG-99-045

Dear Mr. Matter:

The subject final report is provided for your use. Please refer to the Results of Review
section for the overall review results.

If you have any questions concerning the report, please contact Mr. Patrick A. Iler, Director,
Audit Quality, at (216) 433-5408, or Ms. Vera Garrant, A-133 Audit Manager, at (202)
358-2596. We appreciate the courtesies extended to the audit staff. The report distribution is
in Appendix F.

Sincerely,

[original signed by]

Russell A. Rau
Assistant Inspector General for Auditing

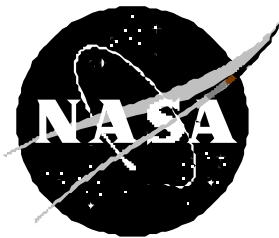
Enclosure

IG-99-045

**QUALITY
CONTROL
REVIEW
REPORT**

**PRICEWATERHOUSECOOPERS LLP AND
DEFENSE CONTRACT AUDIT AGENCY
AUDIT OF THE JET PROPULSION
LABORATORY AT THE CALIFORNIA
INSTITUTE OF TECHNOLOGY FOR THE
FISCAL YEAR ENDED SEPTEMBER 21, 1997**

SEPTEMBER 20, 1999



National Aeronautics and
Space Administration

OFFICE OF INSPECTOR GENERAL

Additional Copies

To obtain additional copies of this report, contact the Assistant Inspector General for Auditing at (202) 358-1232, or visit www.hq.nasa.gov/office/oig/hq/issuedaudits.html.

Suggestions for Future Audits

To suggest ideas for or to request future audits, contact the Assistant Inspector General for Auditing. Ideas and requests can also be mailed to:

Assistant Inspector General for Auditing
NASA Headquarters
Code W
300 E Street, SW
Washington, DC 20546-0001

NASA Hotline

To report fraud, waste, abuse, or mismanagement, contact the NASA OIG Hotline at (800) 424-9183, (800) 535-8134 (TDD), or at www.hq.nasa.gov/office/oig/hq/hotline.html#form; or write to the NASA Inspector General, P.O. Box 23089, L'Enfant Plaza Station, Washington, DC 20026. The identity of each writer and caller can be kept confidential, upon request, to the extent permitted by law.

Acronyms

DCAA	Defense Contract Audit Agency
GAAP	Generally Accepted Accounting Principles
JPL	Jet Propulsion Laboratory
NASA	National Aeronautics and Space Administration
OIG	Office of Inspector General
OMB	Office of Management and Budget
PwC	PricewaterhouseCoopers LLP

NASA Office of Inspector General

**IG-99-045
A9906300**

September 20, 1999

PricewaterhouseCoopers LLP and Defense Contract Audit Agency Audit of the Jet Propulsion Laboratory at the California Institute of Technology for the Fiscal Year Ended September 21, 1997

Introduction

The Jet Propulsion Laboratory (JPL) is a National Aeronautics and Space Administration (NASA) federally funded research and development center in Pasadena, California. JPL is part of the California Institute of Technology (Caltech), a private, not-for-profit educational institution also located in Pasadena. JPL operates mainly under a cost-reimbursement, research and development contract from NASA (NAS7-1260) in the science and technology of unmanned space exploration.

As the cognizant audit agency for JPL, the NASA, Office of Inspector General (OIG) performed a review jointly with the OIG, Department of Defense, of the PricewaterhouseCoopers LLP (PwC) and Defense Contract Audit Agency (DCAA) audit of JPL for the fiscal year ended September 21, 1997. The audit is required by Office of Management and Budget (OMB) Circular A-133, "Audits of States, Local Governments, and Non-Profit Organizations," revised June 24, 1997. The offices of PwC, Los Angeles, California, and DCAA, Pasadena, California, performed the single audit for JPL. JPL reported \$1,195,755,981 in total direct and NASA expenditures for the fiscal year ended September 21, 1997.

Appendix A provides details on the single audit requirements.

Objectives

The objective of a report review is to determine whether the report submitted by the auditee meets the applicable reporting standards and OMB Circular A-133 reporting requirements.

The objectives of our quality control review were to determine whether the audit was conducted in accordance with applicable standards and whether the audit met the auditing and reporting requirements of OMB Circular A-133. See Appendixes B and C for details on the objectives, scope, and methodology.

Results of Review

PwC issued its audit report on JPL on June 30, 1999. The auditors identified (1) a reportable condition for internal controls and (2) findings related to the compliance requirements, but questioned no costs. PwC issued an unqualified opinion on the financial statements, Schedule of Expenditures of Federal Awards, and major program compliance.¹ The auditors found no instances of noncompliance in the financial statement audit that must be reported under generally accepted government auditing standards. Finally, the auditors identified no material weaknesses related to internal controls for the financial statement or the major program.

DCAA issued its audit report on JPL on June 29, 1999. The auditors identified reportable conditions for internal controls and questioned costs related to the findings on compliance requirements. DCAA issued a qualified opinion on compliance for the research and development major program.² Finally, the auditors identified no material weaknesses related to internal controls for the major program.

The PwC and DCAA audit work and report meet the applicable auditing and reporting guidance and regulatory requirements contained in (1) OMB Circular A-133 and its related Compliance Supplement, (2) generally accepted government auditing standards, and (3) generally accepted auditing standards.

Other Matters of Interest

During the initial report and quality control reviews, we identified issues relating to the audit scope, financial statement preparation, and unresolved costs that should be brought to NASA management's attention but do not affect the results of our review. These issues are discussed in detail in Appendix D.

Appendix E provides details on the Federal agencies responsible to resolve the findings and questioned costs identified in the PwC and DCAA reports.

*We have redacted portions of this report due to references to process information. The redacted passages do not affect the validity of this report or management's response.

¹The major program compliance opinion excludes the following research and development program requirements, which DCAA audited: activities allowed or unallowed; allowable costs/cost principles, cash management; period of availability of Federal funds; and special tests and provisions (related to activities allowed or unallowed and allowable costs/cost principles).

²The major program compliance opinion includes the following research and development program requirements, which DCAA audited: activities allowed or unallowed; allowable costs/cost principles, cash management; period of availability of Federal funds; and special tests and provisions (related to activities allowed or unallowed and allowable costs/cost principles).

Appendix A. Single Audit Requirements

The Inspector General Act of 1978, as amended (Public Law 95-452), requires an agency's Inspector General to "take appropriate steps to assure that any work performed by non-Federal auditors complies with the standards established by the Comptroller General."

The Single Audit Act of 1984 (Public Law 98-502) was intended to improve the financial management of state and local governments, while OMB Circular A-133 was intended to improve financial management for nonprofit organizations. The Act and the Circular established uniform requirements for audits of Federal financial assistance, promoted efficient and effective use of audit resources, and helped to ensure that Federal departments and agencies rely on and use the audit work to the maximum extent practicable.

The Single Audit Act Amendments of 1996 (Public Law 104-156) incorporate the previously excluded nonprofit organizations. Including the nonprofit organizations strengthens the usefulness of the audits by establishing one uniform set of auditing and reporting requirements for all Federal award recipients that are required to obtain a single audit. Major changes to the Act include: (1) increasing the audit threshold from \$25,000 to \$300,000 with respect to Federal financial assistance programs before an audit is required; (2) selecting Federal programs for audit based on a risk assessment rather than the amount of funds involved; and (3) improving the contents and timeliness of single audits.

The revised OMB Circular A-133 was issued on June 24, 1997, pursuant to the Single Audit Act Amendments of 1996. In general, the Circular requires that an auditee who expends \$300,000 or more annually in Federal awards, obtain an audit and issue a report of its Federal award expenditures in accordance with the generally accepted government auditing standards applicable to financial audits. The audit must be performed by auditors who meet the independent standards in generally accepted government auditing standards and in accordance with the auditing and reporting requirements of the Circular and its related Compliance Supplement. The audit report submission contains:

- financial statements and related opinion,
- Schedule of Expenditures of Federal Awards and related opinion,
- report on the internal controls and compliance review of the financial statements,
- report on internal controls reviewed and compliance opinion on major programs, and
- Schedule of Findings and Questioned Costs.

The auditee must also submit a Data Collection Form to the Department of Commerce Clearinghouse. The form summarizes the significant information in the audit report for dissemination to the public through the Internet. Responsible officials from the audited entity and the audit organization sign the form certifying to the information presented.

Appendix A

The Compliance Supplement is based on the requirements of the Single Audit Act Amendments of 1996 and the final June 30, 1997, revision of OMB Circular A-133, which provide for the issuance of a compliance supplement to assist auditors in performing the required audits. The National State Auditors Association study states:

The Compliance Supplement provides an invaluable tool to both Federal agencies and auditors in setting forth the important provisions of Federal assistance programs. This tool allows Federal agencies to effectively communicate items which they believe are important to the successful management of the program and legislative intent

Compliance with the Supplement satisfies the requirements of OMB Circular A-133. The Supplement identifies Federal programs by Federal agency. The Supplement identifies existing, important, compliance requirements, which the Federal Government expects the auditors to consider as part of an audit required by the 1996 Amendments. Using the Supplement eliminates the need for the auditors to research the laws and regulations for each major program audit to determine the compliance requirements that are important to the Federal Government and that could have a direct and material effect on the major program. The Supplement is a more efficient and cost-effective approach to performing this research. It "... provides a source of information for auditors to understand the Federal program's objectives, procedures, and compliance requirements relevant to the audit as well as audit objectives and suggested audit procedures for determining compliance with the requirements."

For single audits, the Supplement replaces agency audit guides and other audit requirement documents for individual Federal programs and specifically states which of the following 14 compliance requirements are applicable to a major program that may be audited:

1. Activities Allowed or Unallowed
2. Allowable Costs/Cost Principles
3. Cash Management
4. Davis-Bacon Act
5. Eligibility
6. Equipment and Real Property Management
7. Matching, Level of Effort, Earmarking
8. Period of Availability of Federal Funds
9. Procurement and Suspension and Debarment
10. Program Income
11. Real Property Acquisition/Relocation Assistance
12. Reporting
13. Subrecipient Monitoring
14. Special Tests and Provisions

The Compliance Supplement assists the auditors in determining the audit scope for the Circular's internal control requirements. For each compliance requirement, the Supplement describes the objectives of internal control and certain characteristics that when present and operating

effectively, may ensure compliance with program requirements. The Supplement gives examples of the common characteristics for the 5 components of internal controls (control environment, risk assessment, control activities, information and communication, and monitoring) for the 14 compliance requirements.

Appendix B. Objectives and Scope

Audit Report Review

The objective of an audit report review is to determine whether the report submitted by the auditee meets the applicable reporting standards and the OMB Circular A-133 reporting requirements. As the cognizant Federal audit agency for JPL, we performed a review of the audit report on JPL for the fiscal year ended September 21, 1997. We reviewed the report for compliance with the requirements of the Single Audit Act, Single Audit Act Amendments of 1996, and OMB Circular A-133. We focused our review on the report's qualitative aspects of: (1) due professional care; (2) auditor's qualifications and independence; (3) financial statements, compliance, and internal control reporting; (4) Schedule of Expenditures of Federal Awards; and (5) Schedule of Findings and Questioned Costs.

Quality Control Review

The objectives of a quality control review are to ensure that an audit was conducted in accordance with generally accepted government auditing standards³ and generally accepted auditing standards and whether the audit meets the auditing and reporting requirements of OMB Circular A-133. As the cognizant audit agency for JPL, we conducted a quality control review of the PwC and DCAA audit working papers. We focused the review on the audit's qualitative aspects of:

- auditor's qualifications,
- independence,
- due professional care,
- quality control,
- planning and supervision,
- Federal receivables and payables,
- major program determination,
- internal controls and compliance testing for major programs,
- Schedule of Expenditures of Federal Awards,
- Schedule of Findings and Questioned Costs, and
- Data Collection Form.

We organized our review by the general and field work audit standards and the required elements of a single audit. We emphasized the areas of major concern to the Federal Government such as determining and auditing major program compliance and internal controls. We conducted the review July 19 through 30, 1999, at the Los Angeles, California, office of PwC and the Pasadena, California, office of DCAA. The NASA Office of Inspector General has not previously performed a quality control review at other PwC or DCAA locations.

³These standards are broad statements of the auditors' responsibilities, promulgated by the Comptroller General of the United States.

Peer Review Report

In 1998 Coopers & Lybrand L.L.P. and Price Waterhouse LLP merged to form PwC. Before the merger, each firm had a peer review performed within the 3-year period required by generally accepted government auditing standards. The NASA and Department of Defense Offices of Inspector General reviewed the Coopers & Lybrand L.L.P. and Price Waterhouse LLP peer review reports for PwC. We reviewed the October 28, 1997, Ernst & Young LLP peer review report on the Coopers & Lybrand L.L.P. fiscal year ended March 31, 1997. We also reviewed the November 6, 1996, Deloitte & Touche LLP peer review report on the Price Waterhouse LLP fiscal year ended June 30, 1996. Ernst & Young LLP and Deloitte & Touche LLP determined that Coopers & Lybrand L.L.P. and Price Waterhouse LLP, respectively, met the objectives of the quality control review standards established by the American Institute of Certified Public Accountants and complied with the standards during the fiscal year.

The DCAA has not had the traditional external peer review performed as required by generally accepted government auditing standards. Rather, DCAA is subject to external oversight by the Department of Defense OIG and relies on a combination of internal quality reviews and the external oversight reviews performed by the Department of Defense OIG to fulfill the external peer review requirements. In order to determine that DCAA complies with applicable auditing standards, we have requested further information from DCAA on the operation of its peer review process.

Appendix C. Quality Control Review Methodology

Report of Independent Accountants

The auditors are required to determine whether the financial statements are presented fairly in all material respects in conformity with generally accepted auditing principles and are free of material misstatement. The auditors are also required to subject the Schedule of Expenditures of Federal Awards to the procedures applicable to the audit of the financial statements and to ensure that the amounts are fairly stated in relation to the basic financial statements. We reviewed the audit programs and the testing of evidence to determine whether testing was sufficient based on an assessment of control risk to warrant the conclusion reached. We also reviewed the working papers to determine whether they supported the conclusion.

Schedule of Expenditures of Federal Awards

The recipient is responsible for creating the Schedule of Federal Awards. The auditors are required to audit the information in the Schedule to ensure it is fairly presented in all material respects in relation to the financial statements taken as a whole. We reviewed the audit programs for the appropriate procedures and traced some of the amounts to the Subsidiary Ledger and/or Trial Balance.

Report of Independent Accountants on Compliance and on Internal Control over Financial Reporting Based on an Audit of Financial Statements Performed in Accordance with Government Auditing Standards

The auditors are required to determine whether the recipient has complied with laws and regulations that may have a direct and material effect in determining financial statement amounts. The auditors are also required to obtain an understanding of internal controls that is sufficient to plan the audit and to assess control risk. We reviewed the audit programs for the appropriate procedures, the working paper documentation, and the compliance and substantive testing performed.

Report of Independent Accountants on Compliance with Requirements Applicable to NASA Contract NAS7-1260 and on Internal Control over Compliance in Accordance with Selected Components of OMB Circular A-133

The auditors are required to determine whether the recipient has complied with laws, regulations, and the provisions of contracts and grant agreements that may have a direct and material effect on each of its major Federal programs. The auditors are required to use the procedures in the OMB Circular A-133 Compliance Supplement (May 1998 edition) to determine the compliance requirements for each major program. We reviewed the audit program for the appropriate procedures and compared the audit program steps to those in the Compliance Supplement to determine whether the applicable steps had been performed. We also reviewed the working paper documentation and its support and the compliance tests performed.

The auditors must perform procedures to obtain an understanding of internal controls over Federal programs that is sufficient to plan an audit to support a low-assessed level of control risk for major programs. The auditors must plan and perform internal controls testing over major programs to support a low level of control risk for the assertions relevant to the compliance requirements for each major program. We reviewed the audit programs for the appropriate procedures, the working paper documentation, and the test of controls performed.

Summary of Findings and Questioned Cost Resulting from Audit by PricewaterhouseCoopers LLP

The auditors are required to prepare a Schedule of Findings and Questioned Costs that summarizes the audit results. This schedule includes information about and related to the audit that is not required to be identified in other parts of the audit report including: (1) major programs audited, (2) details on findings and questioned costs (including reportable conditions and material weaknesses), (3) dollar threshold to identify major programs, and (4) whether the recipient is considered to be low risk. We reviewed the audit programs for the appropriate procedures and the working paper documentation supporting the information in the schedule.

Supplement to Report on OMB Circular A-133 Audit of Fiscal Year 1997 Compliance with Requirements Applicable to the Federal Research and Development Program

The auditors are required to determine whether the recipient has complied with laws, regulations, and the provisions of contracts and grant agreements that may have a direct and material effect on each of its major Federal programs. The auditors are required to use the procedures in the OMB Circular A-133 Compliance Supplement (May 1998 edition) to determine the compliance requirements for each major program. We reviewed the audit program for the appropriate procedures and compared the audit program steps to those in the Compliance Supplement to determine whether the applicable steps had been performed. We also reviewed the working paper documentation and its support and the compliance tests performed.

Supplement to Report on OMB Circular A-133 Review of Fiscal Year 1997 Internal Controls Used in Administering Research and Development Program

The auditors must perform procedures to obtain an understanding of internal controls over Federal programs that is sufficient to plan an audit to support a low-assessed level of control risk for major programs. The auditors must plan and perform internal controls testing over major programs to support a low level of control risk for the assertions relevant to the compliance requirements for each major program. We reviewed the audit programs for the appropriate procedures, the working paper documentation, and the test of controls performed.

Appendix D. Other Matters of Interest

During the initial report and quality control reviews, we identified issues relating to the audit scope, financial statement preparation, and unresolved costs that should be brought to NASA management's attention, but do not affect the results of our review. The issues are described in the following paragraphs.

Audit Scope

On January 14, 1999, Caltech elected to report the fiscal year 1997 JPL operations as a separate reporting entity, in accordance with OMB Circular A-133 §__.200(e). On June 11, 1999, Caltech requested permission from the NASA Management Office at JPL to perform a program-specific audit for JPL. Although the NASA denied the request on June 30, 1999, the single audit report states that the audit was performed as a program-specific audit of the \$1.2 billion NASA contract NAS7-1260. Subsequently, PwC issued a letter stating that the report represents an organization-wide audit of the JPL operations. Our quality control review of the audit working papers identified about \$300,000 in other Federal award expenditures that were not part of the audit scope. However, the expenditures do not materially affect the audit. Therefore, the fiscal year 1997 report materially represents an organization-wide audit of the JPL operations.

Financial Statement Preparation

Basis of Accounting. Caltech prepared the JPL financial statements using the modified cash basis of accounting, which is a basis of accounting other than generally accepted accounting principles (GAAP). GAAP requires accrual basis accounting whereby an organization records revenue when it is earned and expenses when they are incurred. The cash basis of accounting records revenues when they are received and expenses when they are paid. Caltech uses a modified cash basis of accounting for payroll transactions by recording the expenditure when the time records are submitted (modified cash basis), rather than at the time of payment (cash basis).

Representatives from the Federal government worked with Caltech to obtain the delinquent OMB Circular A-133 audit of the JPL operations. We acknowledge that the fiscal year 1997 audit is the first year Caltech and JPL reported their operations separately for OMB Circular A-133. We also acknowledge that Caltech made critical, financial decisions to transition from reporting total entity operations to reporting JPL separately from the campus operations. Caltech reported its campus operations for its fiscal year ended September 30, 1997, in accordance with GAAP. However, Caltech reported the JPL operations on a basis other than GAAP for its fiscal year ended September 21, 1997. Therefore, we still need to determine whether Caltech needs to prepare future JPL financial statements in accordance with GAAP.

Statement of Assets and Liabilities. Caltech operates JPL primarily under NASA contract NAS7-1260. Caltech did not prepare a Statement of Assets and Liabilities for JPL because of the nature of the NASA contract. First, JPL does not have a cash balance because Caltech manages

the cash withdrawals on the NASA letter of credit.⁴ Second, JPL does not own any property, plant, or equipment because NASA has title to these assets.

****Deliberative process information omitted.****

-

-

⁴A letter of credit is a method of advance payment.

Appendix E. Findings and Questioned Costs

<u>Finding Reference</u>	<u>Report Page</u>	<u>Finding Description</u>	<u>Costs Questioned</u>	<u>Resolution Agency</u>
<u>PricewaterhouseCoopers LLP</u>				
97-1	18-19	Reportable Conditions-Financial Reporting	N/A ¹	NASA
97-2	20	Davis Bacon Act	N/A	NASA
97-3	21	Property Management	N/A	GSA
97-4	22	Subrecipient Monitoring	N/A	NASA
<u>Defense Contract Audit Agency – Internal Control Report</u>				
97-1	5-6	JPL's Revised Disclosure Statement Does Not in All Respects Describe and Properly Address Its Cost Accounting Practices	N/A	NASA
97-2	6-7	Unallowable Costs Do Not Remain in JPL's Allocation Bases as Required by Cost Accounting Standard (CAS) 405	N/A	NASA
97-3	7-8	JPL Allocates Costs Over Bases Not Representative of Resources Consumed	N/A	NASA
<u>Defense Contract Audit Agency – Compliance Report</u>				
N/A	3-4	Unresolved Subcontract Costs	\$353,689,233	NASA
N/A	4	Costs Related to the California Institute of Technology ²	295,608	NASA
97-4	8-13	Labor Allocated Direct Costs	62,790,414	NASA
97-5	13-17	General Burden-Pool	(62,804,731)	NASA
97-5	13-17	General Burden-Base	62,566,503	NASA
97-6	17-18	Procurement Allocated Direct Cost	246,258	NASA
97-7	18-19	Occupancy	0	NASA
97-8	19-22	Paid Leave	523,804	NASA
97-9	21-22	Direct Material Costs	573,269	NASA

¹Not applicable.

²DCAA identifies these costs as unresolved in its compliance report because the audit was not completed. However, the audit was completed on June 29, 1999, and the costs questioned are identified here. See additional comments in Appendix D.

Appendix F. Report Distribution

Audit Firm/Auditor

Mr. Harold Jarvis, Branch Manager
San Gabriel Valley Branch Office
Defense Contract Audit Agency
1000 E. Lakes Drive, Suite 300
West Covina, CA 91790-2900

Mr. Lawrence P. Uhlfelder
Assistant Director, Policy and Plans
Defense Contract Audit Agency
8725 John J. Kingman Road, Suite 2353
Fort Belvoir, VA 22060-6219

Mr. William Jenkins
Vice President for Business and Finance
California Institute of Technology
Mail Code 212-31
Pasadena, CA 91125

Federal Offices of Inspector General

Department of Defense
General Services Administration

National Aeronautics and Space Administration (NASA) Officials-in-Charge

Code B/Chief Financial Officer
Code B/Comptroller
Code BF/Director, Financial Management Division
Code G/General Counsel
Code H/Associate Administrator for Procurement
Code JM/Director, Management Assessment Division

NASA Field Installation

Director, Jet Propulsion Laboratory

Major Contributors to the Report

Patrick A. Iler, Director, Audit Quality

Vera J. Garrant, A-133 Audit Manager

Van Tran, Financial Statement Audit Manager

Tewana Hoskins, Program Assistant

Nancy C. Cipolla, Report Process Manager